## CLAIMS

What is claimed is:

1. A root-mean-square (RMS) meter, comprising:

an RMS converter having a converter input and a converter output, wherein the RMS converter converts a time varying signal applied to the converter input to a signal at the converter output, wherein the value of the signal at the converter output is indicative of the RMS value of the applied signal, and wherein the signal at the converter output comprises a non-time varying component and a time varying component as determined by a time constant of the RMS converter;

an inverting amplifier having an inverter input and an inverter output, wherein the converter output is connected to the inverter input; and

a switch having first, second, and central contacts, wherein the converter output is connected to the first contact, wherein the inverter output is connected to the second contact, wherein when the switch is in a first position, the first contact is connected to the central contact, and wherein when the switch is in a second position, the second contact is connected to the central contact.

2. The RMS meter as recited in claim 1, further comprising an analog-to-digital converter (ADC) having an ADC input and an ADC output, wherein the central contact is connected to the ADC input, wherein the central contact is alternately connected to the first contact and to the second contact, and wherein the analog-to-digital converter comprises an internal drifting offset signal.

3. The RMS meter as recited in claim 2, further comprising a high-pass filter having a filter input and a filter output, wherein the ADC output is connected to the filter input and wherein the high-pass filter removes substantially all of the internal drifting offset signal.

4. The RMS meter as recited in claim 3, further comprising an absolute value circuit having an absolute value circuit input and an absolute value circuit output, wherein the filter output is connected to the absolute value circuit input and wherein the signal at the absolute value circuit output is the absolute value of the absolute value circuit input.

5. The RMS meter as recited in claim 4, further comprising a glitch remover circuit having a glitch remover circuit input and a glitch remover circuit output, wherein the absolute value circuit output is connected to the glitch remover circuit input and wherein the glitch remover circuit removes signal disturbances in the signal at the glitch remover circuit input that were caused by transitions from the switch first position to the switch second position.

6. The RMS meter as recited in claim 5, further comprising additional RMS conversion circuitry having a conversion circuitry input and a conversion circuitry output, wherein the glitch remover circuit output is connected to the conversion circuitry input and wherein the additional RMS conversion circuitry converts the signal at the conversion circuitry input to a signal at the conversion circuitry output that is representative of the RMS value of the signal at the conversion circuitry input.

7. The RMS meter as recited in claim 6, wherein the additional RMS conversion circuitry computes the signal at the conversion circuitry output

from the signal at the conversion circuitry input by digital signal processing.

8. The RMS meter as recited in claim 3, further comprising additional RMS conversion circuitry having a conversion circuitry input and a conversion circuitry output, wherein the filter output is connected to the conversion circuitry input and wherein the additional RMS conversion circuitry converts the signal at the conversion circuitry input to a signal at the conversion circuitry output that is representative of the RMS value of the signal at the conversion circuitry input.

9. The RMS meter as recited in claim 8, wherein the additional RMS conversion circuitry computes the signal at the conversion circuitry output from the signal at the conversion circuitry input by digital signal processing.

10. A method for processing an input signal, comprising:

obtaining a root-mean-square signal by taking the root-mean-square of the input signal;

inverting the root-mean-square signal; and

using equal duty cycles, combining the root-mean-square signal and the inverted root-mean-square signal by periodically switching between the two signals.

11. The method as recited in claim 10, further comprising:

converting the signal resulting from the step combining the root-mean-square signal and the inverted root-mean-square signal to a digital signal.

12. The method as recited in claim 11, further comprising:

removing frequency components below a preselected frequency from the signal resulting from the step converting the combined signal to a digital signal.

13. The method as recited in claim 12, further comprising:

obtaining the absolute value of the signal resulting from the step removing frequency components below the preselected frequency.

14. The method as recited in claim 13, further comprising:

removing glitches resulting from the step combining the root-mean-square signal and the inverted root-mean-square signal by periodically switching between the two signals from the signal resulting from the step obtaining the absolute value.

15. The method as recited in claim 14, further comprising:

obtaining the root-mean-square value of the signal resulting from the step removing glitches from the signal.

16. The method as recited in claim 15, providing the root-mean-square is obtained by digital signal processing in the step obtaining the root-mean-square value of the signal resulting from the step removing glitches from the signal.

17. The method as recited in claim 12, further comprising:

obtaining the root-mean-square value of the signal resulting from the step removing frequency components below the preselected frequency.

18. The method as recited in claim 17, providing the root-mean-square is obtained by digital signal processing in the step obtaining the root-mean-square value of the signal resulting from the step obtaining the absolute value of the signal.